

## PART B

13. A feather falls to the ground.

- What are the two forces that are interacting with the feather?
- Imagine removing one of the forces that is interacting with the feather. How would the feather behave?
- How would the feather behave if it were the other force that was removed?
- Is the feather, in situation (a), accelerating? Explain.



14. A rock is released from rest, 2 m above the Earth.

- What are the two forces that are interacting with the rock?
- Imagine removing one of the forces that is interacting with the rock. How would the rock behave?
- How would the rock behave if it were the other force that was removed?
- Is the rock, in situation (a), accelerating? Explain.



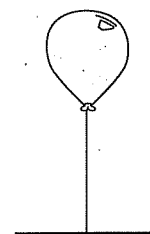
15. A sky-diver has reached terminal velocity.

- What is meant by terminal velocity?
- What are the two forces that are interacting with the skydiver?
- Imagine removing one of the forces that is interacting with the skydiver. How would the skydiver behave?
- How would the skydiver behave if it were the other force that was removed?
- Is the skydiver, in situation (b), accelerating? Explain.



16. A balloon is filled with helium gas and attached to the ground.

- What are the **three** forces that are interacting with the balloon?
- Imagine removing one of the forces that is interacting with the balloon. How would the balloon behave?
- Repeat part (b) for each of the other forces.
- Is the balloon accelerating? Explain.



17. A skydiver falls to the earth with her parachute opened.

- What are the three forces that are interacting with the skydiver?
- Imagine removing one of the forces that is interacting with the skydiver. How would the skydiver behave?
- Repeat part (b) for each of the other forces.
- Is the skydiver accelerating? Explain.



18. A coffee mug sits on a table with a giant fizzicks book on top of it.

- What are the forces that are interacting with the mug?
- Imagine removing one of the forces that is interacting with the coffee mug. How would the coffee mug behave?
- Repeat part (b) for each of the other forces.
- Is the coffee mug accelerating? Explain.

